

REMARKS

Claims 1, 2 and 4-9 are pending in the subject application. Claims 1, 2, 5 and 7 are currently amended to further define that the fluorescent particles are capable of absorbing excitation light having a wavelength of less than 600 nm. Support for currently amended claims 1, 2, 5 and 7 can be found in at least paragraph [0039] of the subject application as published (specifically, U.S. Publ. Pat. Appl. No. 2007/0016075), which states that “if the fluorescence wavelength of the fluorescent particles for detecting a sentinel lymph node is in a range of 600 to 900 nm, the wavelength of the excitation energy light is preferably less than 600 nm.” As such, no new matter is added via the present Amendment. Claim 3 was previously cancelled. No claims are cancelled, withdrawn or added in the present Amendment.

Claims 1, 2, 5 and 7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 6,159,445 to Klaveness et al. (the ‘445 patent). Claims 1, 2, 5 and 7 also stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 6,350,431 to Snow et al. (the ‘431 patent).

With respect to the rejection of claims 1, 2, 5 and 7 over the ‘445 patent, the Examiner contends that the ‘445 patent discloses a method of generating an image of a human by administering a contrast agent to the body and creating a light image of a region of interest. The Examiner further contends that the contrast agent can comprise a fluorophore which has a characteristic emission in the 600-1300 nm range.

With respect to the rejection of claims 1, 2, 5 and 7 over the ‘431 patent, the Examiner contends that the ‘431 patent discloses compounds that are useful as contrast agents in light

imaging procedures, in particular compounds containing a plurality of chromophores which have an emission maxima in the visible to far infrared range (which includes the 600-900 nm range).

While Applicants make no concession as to the propriety of the Examiner's rejections of these claims based upon 35 U.S.C. § 102(b), the Applicants have amended claims 1, 2, 5 and 7 to render both of these rejections by the Examiner moot. In particular, currently amended claims 1, 2, 5 and 7 recite that the particles of these claims are capable of absorbing excitation light having a wavelength of less than 600 nm. These claims illustrate that the particles absorb excitation lighting having a wavelength of less than 600 nm, and emit fluorescent having a wavelength of from 600 to 900 nm. Thus, there is a clear distinction between the wavelength of the excitation light absorbed and the wavelength of the fluorescence emitted by the particles, i.e., the wavelength ranges for absorption and emission are mutually exclusive.

As the Examiner is aware, to establish anticipation under 35 U.S.C. §102, a reference must teach every element of a claim being rejected. (see MPEP §2131). Because the '445 patent and the '431 patent each fail to disclose, teach, or even suggest particles which are capable of absorbing excitation light having a wavelength of less than 600 nm and emitting fluorescence having a wavelength of from 600 to 900 nm, the Applicants respectfully traverse each of the Examiner's rejections of claims 1, 2, 5 and 7 under 35 U.S.C. §102.

In fact, not only does the '445 patent fail to disclose, teach, or even suggest particles capable of absorbing excitation light having a wavelength of less than 600 nm and emitting fluorescence having a wavelength of from 600 to 900 nm, but the '445 patent is concerned with a different type of particles. Column 7, lines 49-53 of the '445 patent expressly states "[a]ll the light imaging dyes or contrast agents described in the state-of-the-art have different properties,

but all those agents have an effect on the incident light, leading to either absorption and/or fluorescence. However, none of these contrast agents is used as a particulate contrast agent.” (emphasis added). Thus, the ‘445 patent expressly distinguishes between particles which absorb and/or emit fluorescence, and those which are particulate contrast agents, and the ‘445 patent is concerned with the latter. In particular, Column 7, lines 55-58 of the ‘445 patent goes on to state that “[w]e now have found that contrast enhancement may be achieved particularly efficiently in light imaging methods by introducing particulate materials as scattering contrast agents.” (emphasis added). Scattering contrast agents are differentiated from agents which have an effect on the incident light within the ‘445 patent; as such, the scattering contrast agents of the ‘445 patent fail to absorb excitation light having a wavelength of less than 600 nm, as claimed in the subject application.

The Applicants appreciate that the ‘445 patent also discloses that the particles disclosed therein may further comprise a chromophore. However, in column 10, lines 17-21, the ‘445 patent explicitly states that “[s]uch polymer particles may be simple scatterers or may be modified to carry a chromophore (or fluorophore), preferably having a characteristic absorption and/or emission maxima in the 600 to 1300 nm range.” Thus, even when the polymer particles of the ‘445 patent comprise a chromophore or fluorophore, the absorption is in the range of 600 to 1300 nm. Conversely, the particles of the subject application are claimed to be capable of absorbing excitation light having a wavelength of less than 600 nm. Moreover, the particles of the 445 patent absorb light and emit fluorescence in the same wavelength, i.e., from 600 to 1300 nm, rather than at mutually exclusive wavelengths, as claimed in the subject application.

As set forth above, the Applicants also note that the '431 patent also fails to disclose, teach, or even suggest particles capable of absorbing excitation light having a wavelength less than 600 nm and emitting fluorescence having a wavelength of from 600 to 900 nm, as claimed in the subject application. In particular, the Applicants point out that the '431 patent fails to disclose mutually exclusive ranges for absorption versus emission. Specifically, column 16, lines 61-64 of the '431 patent states that "[p]referred are chromophores having an absorption or emission maximum in the visible wavelength range 300 to 700 nm, especially 400 to 600 nm." As such, the chromophores of the '431 patent absorb light and emit fluorescence in the same wavelength, rather than at mutually exclusive wavelengths, as claimed in the subject application.

The Applicants also note that claims 4, 6, 8 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the '431 patent. However, because these claims are dependent claims which depend from independent claims 1, 2, 5 and/or 7, this rejection is respectfully traversed in view of the fact the Applicants have overcome the Examiner's rejections of independent claims 1, 2, 5 and 7.

In view of the foregoing, the Applicants submit that claims 1, 2 and 4-9 are both novel and non-obvious over the prior, including over the '445 and '431 patents. As such, the Applicants believe the subject application is in condition for allowance, and such allowance is respectfully requested.

The proper fee for a Petition for a One Month Extension of Time is included herewith. While it is believed that no additional fees are presently due, the Commissioner is authorized to charge the Deposit Account No. 08-2789, in the name of Howard & Howard Attorneys PLLC for any fees or credit the account for any overpayment.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS PLLC

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